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Missouri State Auditor

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HIGHER EDUCATION

Tuition Levels Follow-up



Tuition Continues to Rise Faster Than Inflation and Personal Income

This report is a follow-up on our 2003 report titled *Review of Higher Education Tuition Levels* (Report no. 2003-40). Audit objectives included evaluating the status of prior recommendations and focused on tuition increases and factors affecting tuition levels. Missouri's public institutions continue to have some of the highest tuition levels in the Midwest. Although institutions had taken a variety of actions to reduce costs, some institutions still may not be operating as efficiently as possible because comprehensive on-going efficiency evaluations were not performed and the Department of Higher Education (DHE) had no formal centralized clearinghouse to identify, explore, and implement best practices.

Missouri's tuition continues to rank high

Over the last three fiscal years (2004-2006) Missouri's average annual tuition level increase (28 percent) has been the lowest of the Big 12 states, with only one other state among the contiguous states having a lower increase. However, Missouri's \$5,829 average annualized tuition for 4-year public institutions was still the highest tuition among Big 12 states, second only to Illinois among the contiguous states, above the national average of \$5,491 for fiscal year 2005-2006, and continued to increase at rates above inflation and personal income. Our analysis also found funding for state tuition assistance grants had decreased during the 4-year period of 2002 to 2005. In both 2000 and 2002, Missouri received a D+ grade on its affordability of higher education from the National Center for Public Policy and Higher Education. In 2004, Missouri received an F on affordability along with 35 other states. (See pages 7-11)

Past cuts and lack of increases to state funding continues to affect tuition levels

In fiscal years 2002 and 2003, the General Assembly cut state funding for higher education due to state budget pressures. Most 4-year institutions experienced state budget withholdings totaling approximately 18 percent of original appropriations during 2002. In fiscal year 2003, the state cut 10 percent of state funding to higher education from the core fiscal year 2002 budget amount. In fiscal years 2004 through 2006, state funding to higher education remained relatively stable but at the new lower levels. For fiscal year 2007, a 2 percent increase in higher education's funding was approved by the General Assembly. However, this increase in appropriations will likely not meet inflationary measures much less restore years of cuts to higher education's appropriations. In addition, above-inflation spending by some institutions during fiscal years 2003 through 2006 also influenced increasing tuition levels. (See page 12)

DHE not performing statutorily required mission reviews

DHE halted formal mission reviews in 2002 due to budget reductions and staff turnover, according to DHE officials. As a result, DHE has not collected information and data for assessing the cost-effectiveness of academic programs—the largest component of higher education spending. Officials said DHE had historically completed some mission reviews each year, but state law requires mission reviews of colleges and universities once every five years. As a result, these officials contend a new review cycle would not be required until 2006, because DHE completed formal reviews for all institutions in 2001. However, the officials also noted the

formal reviews would only begin again with reinstated funding and personnel. (See page 15)

DHE lacks authority to arbitrate disputes between public institutions

The use of consortia and collaborative agreements often result in more economical opportunities for students to obtain higher education services. However, a recent dispute concerning an agreement between two Missouri public institutions resulted in legal action. As of June 2006 this dispute had not been resolved. DHE unsuccessfully attempted to arbitrate a settlement between the institutions. As a result, these institutions are spending public resources to litigate the issues. (See page 23)

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Abbreviations

| | |
|------|-------------------------------------|
| CSR | Code of State Regulations |
| CPI | Consumer Price Index |
| DHE | Department of Higher Education |
| FTE | Full-Time Equivalent |
| HEPI | Higher Education Price Index |
| RSMo | Missouri Revised Statutes |
| SAO | State Auditor's Office |
| SEMO | Southeast Missouri State University |



CLAIRE McCASKILL
Missouri State Auditor

Honorable Matt Blunt, Governor
and
Dr. Charles J. McClain, Interim Commissioner
Department of Higher Education
Jefferson City, MO 65109

This report is a follow-up on our 2003 report titled *Review of Higher Education Tuition Levels* (Report no. 2003-40). The objectives of this audit were to assess the status of prior recommendations and to focus on tuition increases and factors affecting tuition levels which included, determining the extent state educational institutions had reduced costs, and whether these institutions had conducted comprehensive efficiency evaluations of academic and non-academic programs to evaluate cost-effectiveness.

In our prior report we recommended the Department of Higher Education (DHE) collect academic productivity and cost data so DHE would be better equipped to help institution governing boards assess the cost-effectiveness of academic programs, identify opportunities to lower costs, and thereby lessen pressure to raise tuition. We determined the DHE had not implemented these recommendations.

As noted in the prior report, we found average tuition continued to rise faster than inflation and personal income measures. One reason for this situation is previous state funding cuts have not been restored during the three fiscal years ending June 30, 2006, and increases over this period have not kept pace with inflation. Also, some institutions continued to spend at rates exceeding inflation. We also found institutions had taken a variety of actions to reduce costs. However, some institutions still may not be operating as efficiently as possible because comprehensive on-going efficiency evaluations were not performed. In addition, DHE and the institutions had no centralized method (clearinghouse) for identifying and exploring the feasibility of implementing identified cost-effective best practices. We further found the department needed additional statutory authority to manage and settle disputes involving consortia and collaborative agreements between educational institutions.

We conducted our audit in accordance with applicable standards contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and included such procedures as we considered necessary in the circumstances. This report was prepared under the direction of John Blattel. Key contributors to this report were John Luetkemeyer, Ben Douglas, Michael Price and Lee Drury.

Claire McCaskill
State Auditor

Introduction

The Department of Higher Education (DHE), headed by a coordinating board, evaluates institution performance, and carries out other goals and administrative duties. Authority to set tuition levels at Missouri's 4-year public institutions rests with the governing board of each institution. Although the department does not have authority to set tuition levels, it does have statutory responsibility to conduct reviews to ensure Missouri's higher education system responds to the state's needs and is focused, balanced, cost-effective, and characterized by high quality programs.¹

Additionally, DHE has responsibility for recommending to the governing board of any higher education institution in the state the development, consolidation or elimination of programs, degree offerings, physical facilities or policy changes where that action is deemed by the coordinating board in the best interests of the institutions and/or the general requirements of the state.² DHE has authority to collect information and data from the institutions for any purpose deemed appropriate including information on the approximately 1,530 academic programs listed in the state's official program inventory for 4-year institutions.³

In fiscal year 2007, state funding for 4-year public institutions is projected to be over \$730 million. Figure 1.1 shows higher education's revenue for public 4-year institutions for fiscal years 1999 to 2006. This revenue is used to meet the goals and administrative responsibilities for the state's higher education system. In the fall of 2005, 107,920 undergraduate students attended Missouri's 4-year public institutions, of which 83.7 percent of the students were Missouri residents, 12.6 percent were non-residents, and the remaining 3.7 percent were other students.⁴

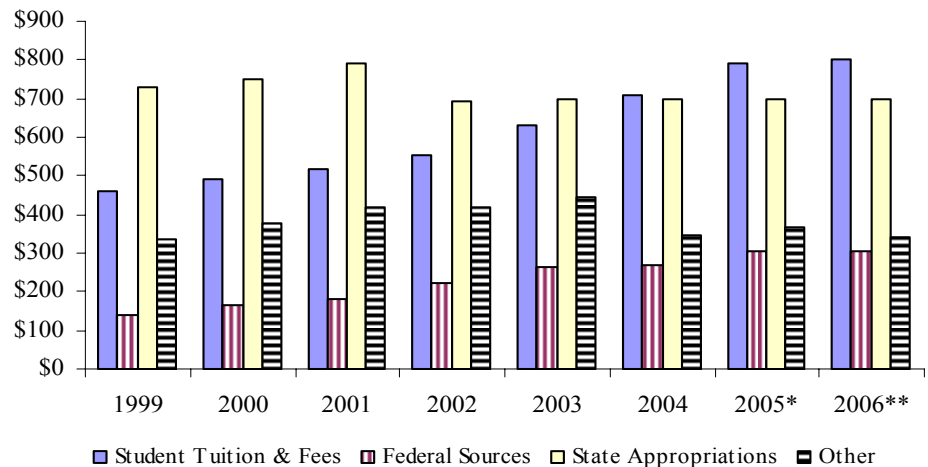
¹ Section 173.030(7), RSMo

² Section 173.030(2), RSMo

³ 6 CSR 10-4.021

⁴ The other students category includes students from U.S. territories, foreign students, and students of unknown geographic origin.

Figure 1.1: Revenue by Source for 4-Year Public Universities (dollars in millions)



*Estimated by each institution

**Projected - Includes state appropriations net of Governor's 3 percent withholdings

Source: Prepared by SAO based on DHE revenue data.

Previous SAO Audit Information

In May 2003, we reported average tuition had risen faster than inflation and personal income measures. We found this situation had occurred because of decreased state funding and spending by institutions at a rate exceeding the rate of inflation. We also found while some institutions had begun to initiate cost containment efforts, DHE had not collected academic program productivity and cost data. We reported that with such data, DHE would be better equipped to help institution governing boards assess the cost-effectiveness of academic programs. As a result, opportunities to lower costs and lessen pressure to raise tuition may be lost. In its response to the report's findings, DHE agreed cost should be considered when reviewing existing academic programs and their relation to an institution's mission. DHE noted it had initiated the Results Improvement Initiative to enhance performance data collection and reporting with an emphasis on accountability at Missouri's 2 and 4-year institutions. DHE further noted the initiative would aid in the redesign of campus-based reviews of existing academic programs for quality and cost-effectiveness.

DHE officials informed us due to past budget cuts they had not conducted formal mission reviews. At the time of our review in February 2006, funding and personnel had not been reinstated and mission reviews had not been re-instituted. Officials also noted although DHE had initiated the Results Improvement Initiative to enhance performance data collection and reporting with an emphasis on accountability, major financial cuts to higher education in recent years made it difficult to maintain momentum on designing a more developed approach to higher education accountability.

However, officials further noted a number of factors suggest it is time for Missouri to reevaluate its approach to higher education accountability.

Scope and Methodology

To determine whether recommendations in our prior report had been implemented, we met with a DHE official to obtain information regarding the status of the report's recommendations.

To determine the extent tuition increased, we reviewed in-state undergraduate tuition levels at the thirteen 4-year public university campuses in Missouri.⁵ Our review of tuition levels focused on identifying trends in annual tuition, state appropriations, enrollment and operating expenditures between fiscal years 1998 to 2006. We did not attempt to determine the appropriate tuition levels for the institutions. We obtained most of the data from DHE. While most of the data presented in this report through fiscal year 2004 is actual data, some data presented for fiscal years 2005 and 2006 may be based on budget estimates and projections. To provide context for tuition levels at Missouri institutions, we obtained data on a comparison group of 4-year public colleges and universities in Big 12 Conference states—Colorado, Iowa, Kansas, Nebraska, Oklahoma and Texas—and Missouri's other contiguous states—Arkansas, Illinois, Kentucky and Tennessee. We obtained this data from the Chronicle of Higher Education.

To determine the factors affecting tuition levels and to determine to what extent state educational institutions have (1) reduced costs, (2) conducted comprehensive efficiency evaluations, and (3) evaluated academic programs to ensure cost-effectiveness, we also interviewed officials at five regional institutions (Central Missouri State University in Warrensburg, Lincoln University in Jefferson City, Missouri State University in Springfield, Northwest Missouri State University in Maryville, and Southeast Missouri State University in Cape Girardeau) and the University of Missouri system.

We performed data reliability tests on budget data and academic program data obtained from DHE and the institutions. We determined this information was sufficiently reliable for the purposes of this report.

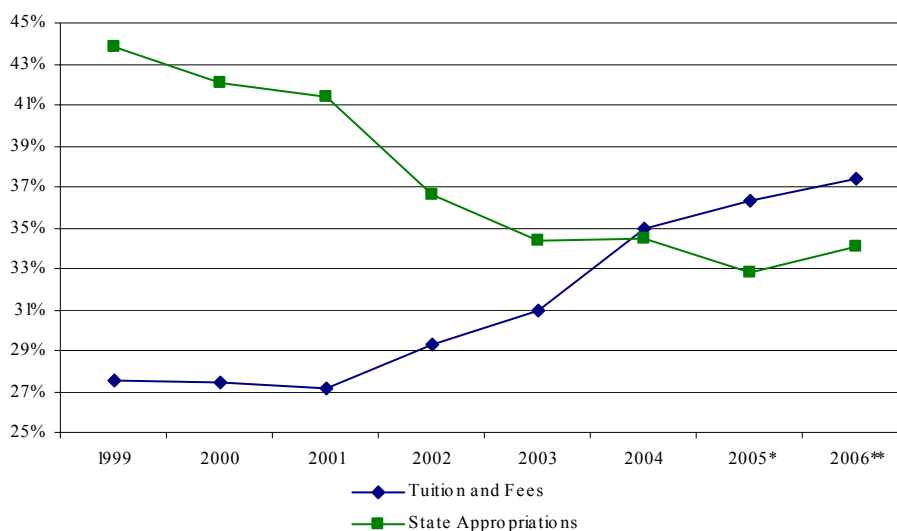
We requested comments on a draft of our report from the Commissioner of the Department of Higher Education. We also provided copies of the draft to the presidents of Missouri's 4-year public institutions. Although a formal response was not required, comments were received from five institutions. We conducted our work between May 2005 and February 2006.

⁵ A list of the thirteen 4-year public universities can be found in Appendix I.

Tuition Level Trend Information

This chapter updates financial information and trends since our prior report issued in May 2003. These trends show the average educational fee (tuition⁶) to attend a Missouri 4-year public institution has continued to increase at rates faster than inflation and personal income for the past 7 years. Past cuts in and lack of increased state funding have continued to influence institutions to pass increasing costs on to students and their families through higher tuition. Figure 2.1 shows how 4-year public university student costs percentages have changed compared to the percentages the state paid during the period fiscal year 1999 through fiscal year 2006.

Figure 2.1: Percentage of 4-Year Public University Costs from State Appropriations Compared to Tuition and Fees (Per Student)



*Estimated

**Projected

Source: Prepared by SAO based on data from DHE.

Missouri's Tuition Continues to Rank High Among Comparison Group

Over the last three fiscal years (2004-2006) Missouri's average tuition level increase (27 percent) has been the lowest of the Big 12 states, with only one other state among the contiguous states having as low an increase. However, Missouri's \$5,829 average annualized tuition for 4-year public institutions was still the highest tuition among Big 12 states, second only to Illinois among the contiguous states, above the national average of \$5,491 for fiscal year 2005-2006, and continued to increase at rates above inflation and

⁶The term "tuition," when used in this report, is defined as the charges to first-time, full-time undergraduates based on a 9-month academic year of 30 semester hours or 45 quarter hours. Amounts presented include mandatory fees charged students for non-academic services such as student health care, student unions, and recreation facilities.

personal income. In both 2000 and 2002, Missouri received a D+ grade on its affordability of higher education from the National Center for Public Policy and Higher Education.⁷ In 2004, Missouri received an F on affordability along with 35 other states. Table 2.1 shows percentage increases in average tuition levels by fiscal year, ranking of comparison states by average annualized tuition for the 2005-2006 fiscal year, and the 3-year percentage increases in average tuition for each state during the periods 2003 through 2006 and 2000 through 2003. For comparison purposes, the table also lists the Consumer Price Index (CPI) and the Higher Education Price Index (HEPI). CPI is a commonly used index that uses prices of specific sets of consumer goods to gauge levels of inflation throughout the economy. HEPI is an index used by many colleges and universities which measures the price of specific costs associated with higher learning to gauge inflation for this type of education specifically.

Table 2.1: Average Tuition Levels

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Percent Increase | |
|-------------------|---------|---------|---------|---------|---------|---------|---------|------------------|-------|
| | | | | | | | | 03-06 | 00-03 |
| Illinois | \$3,587 | \$3,725 | \$4,013 | \$4,581 | \$5,187 | \$5,877 | \$6,472 | 41 | 28 |
| Missouri* | 3,502 | 3,691 | 3,905 | 4,577 | 5,151 | 5,573 | 5,829 | 27 | 31 |
| Iowa* | 3,010 | 3,179 | 3,468 | 4,140 | 4,979 | 5,403 | 5,616 | 36 | 38 |
| Arkansas | 2,829 | 3,063 | 3,375 | 3,632 | 4,043 | 4,530 | 4,886 | 35 | 28 |
| Kentucky | 2,613 | 2,769 | 3,000 | 3,327 | 3,720 | 4,292 | 4,881 | 47 | 27 |
| Texas* | 2,578 | 2,777 | 2,975 | 3,241 | 3,735 | 4,350 | 4,705 | 45 | 26 |
| Tennessee | 2,707 | 3,005 | 3,397 | 3,656 | 4,131 | 4,216 | 4,650 | 27 | 35 |
| Colorado* | 2,894 | 2,965 | 3,126 | 3,359 | 3,581 | 3,869 | 4,463 | 33 | 16 |
| Nebraska* | 2,666 | 2,800 | 3,024 | 3,361 | 3,828 | 4,215 | 4,404 | 31 | 26 |
| Kansas* | 2,426 | 2,583 | 2,656 | 3,020 | 3,529 | 3,980 | 4,386 | 45 | 24 |
| Oklahoma* | 2,013 | 2,054 | 2,273 | 2,433 | 2,935 | 3,198 | 3,445 | 42 | 21 |
| HEPI | | | | | | | | 14 | 12 |
| CPI | | | | | | | | 8 | 7 |
| Personal Income** | | | | | | | | 8 | 10 |

*Big 12 Conference states

**The personal income measure used is real disposable personal income per capita. For the 03-06 period, personal income data was only available until 2005, making 2003-2006 personal income actually a measure of 2003-2005.

Source: Prepared by the SAO using tuition data obtained from the Chronicle of Higher Education and real disposable personal income per capita data obtained from United States Department of Commerce Bureau of Economic Analysis.

⁷ Missouri's grade was based on a review of public and private 2-year and 4-year schools.

The University of Missouri's tuition levels at its four campuses contributed to the state's high average tuition level relative to the comparison group and the national average. The four campuses had the fourth through seventh highest tuition levels among the 44 doctoral and research institutions in the Big 12 and contiguous states.⁸ The three institutions with higher tuition are the University of Illinois campuses in Urbana-Champaign and Chicago and the Colorado School of Mines. The University of Missouri, with its four campuses, is the only public doctoral and research university in the state.

According to the College Board,⁹ average tuition at 4-year public institutions nationally was 7.1 percent higher for school year 2006 than the year before. Missouri's year-to-year increase was 4.6 percent (2.5 percentage points lower than the national average).

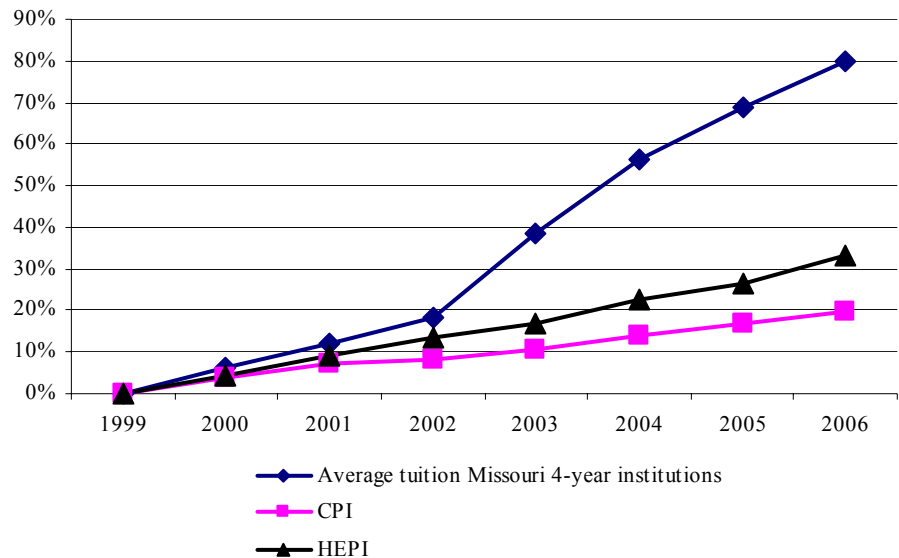
Average tuition outpaced
inflation and personal income
measures

Table 2.1 shows Missouri's 4-year public institutions' average annual tuition level for the 3-year period ending in fiscal year 2006 continued to increase at rates much higher than inflation. For example, Missouri's 27 percent increase was significantly higher than the 14 percent HEPI increase and the 8 percent increases for each the CPI and personal income, during the same 3-year period. Figure 2.2 compares the growth trends in average tuition to the two inflation measures. This comparison is based on annual average tuition by school year compared to inflation measures, which are by state fiscal year ending June 30.

⁸ Doctoral/Research Universities (Extensive and Intensive) published by the Carnegie Foundation for the Advancement of Teaching classifies these schools. Table I.2 in Appendix I shows the tuition levels from these schools.

⁹ A not-for-profit examination board with a membership of over 4,700 institutions of higher learning

Figure 2.2: Percentage Increase in Average Tuition Levels for Missouri 4-Year Public Universities Compared to Inflation Relative to 1999 Levels



Source: Prepared by the SAO based on data from the Chronicle for Higher Education and inflation data obtained from University of Illinois, the Bureau of Labor Statistics and the Commonfund. All data presented in the figure are actual amounts except for the 2006 CPI and HEPI amounts which are estimates.

Since 1997, the University of Missouri System's policy has been to match tuition increases to HEPI increases. Unfortunately the University of Missouri tuition increases significantly exceeded inflation in fiscal years 2003, 2004, and 2005. In 2005, the University of Missouri considered the idea of guaranteed tuition which would fix tuition for incoming college freshmen. The idea was to guarantee tuition levels for a 4-year period to provide students and parents stable tuition costs during their undergraduate college tenure, assuming graduation in 4 years. This idea was abandoned because it did not have the support of students, parents, and the business community as determined by the University President through forums held statewide to which the public was invited. After abandoning the guaranteed tuition idea, the university made a more recent, late 2005, tuition level increase proposal (similar to the 1997 policy) to its board of curators. Under the new proposal, the university would hold tuition increases to the rate of HEPI increases so long as state financial support keeps pace with HEPI.

According to university officials, objectives and benefits of the proposed policy would, (1) provide stability and predictability in setting tuition by telling students and families about planned increases more than a year before classes start, (2) clarify the relationship between state support and tuition levels, allowing lawmakers and the governor to know in advance the impact of their actions taken on tuition, and (3) promote accountability and

transparency in setting tuition by reflecting the actual impact of inflation on both family budgets and higher education's unique mission.

Tuition levels at regional institutions also outpaced inflation and income

Although tuition increases for Missouri were the lowest in our comparison group, average tuition for Missouri's 4-year regional institutions¹⁰ still increased 23 percent between state fiscal years 2003 and 2006, significantly higher than HEPI, CPI, and real disposable personal income per capita.

Missouri's 4-year regional institution average tuition for school year 2006 was the third highest among the comparison group states, exceeded only by Illinois and Iowa. Table 2.2 ranks the states' regional institutions by average tuition in state fiscal year 2006 and shows the 3-year increases for each state for the 3-year period 2003 through 2006 compared to the 3-year period 2000 through 2003.

Table 2.2: Regional Colleges and Universities Average Tuition Levels by State Fiscal Year

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Percent Increase | |
|-------------------|---------|---------|---------|---------|---------|---------|---------|------------------|-------|
| | | | | | | | | 03-06 | 00-03 |
| Illinois | \$3,090 | \$3,205 | \$3,463 | \$3,799 | \$4,580 | \$5,184 | \$5,731 | 51 | 23 |
| Iowa | 2,988 | 3,130 | 3,440 | 4,118 | 4,916 | 5,387 | 5,602 | 36 | 38 |
| Missouri* | 2,967 | 3,196 | 3,417 | 4,100 | 4,442 | 4,832 | 5,049 | 23 | 38 |
| Arkansas | 2,652 | 2,904 | 3,268 | 3,517 | 3,950 | 4,342 | 4,706 | 34 | 33 |
| Kentucky | 2,394 | 2,542 | 2,750 | 3,093 | 3,460 | 4,022 | 4,618 | 49 | 29 |
| Tennessee | 2,578 | 2,790 | 3,193 | 3,442 | 3,870 | 4,110 | 4,513 | 31 | 34 |
| Texas | 2,381 | 2,588 | 2,797 | 3,045 | 3,450 | 3,922 | 4,296 | 41 | 28 |
| Nebraska | 2,467 | 2,626 | 2,816 | 3,156 | 3,574 | 3,898 | 4,066 | 29 | 28 |
| Colorado | 2,278 | 2,368 | 2,527 | 2,677 | 2,826 | 3,024 | 3,474 | 30 | 18 |
| Kansas | 2,097 | 2,220 | 2,280 | 2,439 | 2,782 | 3,077 | 3,307 | 36 | 16 |
| Oklahoma | 1,935 | 1,956 | 2,178 | 2,329 | 2,749 | 3,017 | 3,257 | 40 | 20 |
| HEPI | | | | | | | | 14 | 12 |
| CPI | | | | | | | | 8 | 7 |
| Personal Income** | | | | | | | | 8 | 10 |

*See Appendix I for the tuition levels for each regional institution in Missouri.

**The personal income measure used is real disposable personal income per capita. For the 03-06 period, personal income data was only available until 2005, making 2003-2006 personal income actually a measure of 2003-2005.

Source: Prepared by the SAO using tuition data obtained from the Chronicle of Higher Education and real disposable personal income per capita data obtained from United States Department of Commerce Bureau of Economic Analysis.

¹⁰For the purpose of this report, the term "regional schools" is defined as all public 4-year schools, except those with Carnegie classification of doctoral/research and medical sciences.

Past Cuts and Lack of Increases Continue to Affect Tuition Levels

University officials we interviewed said state support is the primary factor in determining tuition levels. According to the officials, when state appropriations are reduced or remain flat tuition levels generally are negatively impacted. This negative correlation means when appropriations decrease or remain flat tuition almost always increases to cover expenses.

In fiscal years 2002 and 2003, the General Assembly cut state funding for higher education due to state budget pressures. Most 4-year institutions experienced state budget withholdings totaling approximately 18 percent of original appropriations during 2002. In fiscal year 2003, the state cut 10 percent of state funding to higher education from the core fiscal year 2002 budget amount. In fiscal years 2004 through 2006, state funding to higher education remained relatively stable (although at the new lower levels). For fiscal year 2007, a 2 percent increase in higher education's funding was approved by the General Assembly. However, this increase in appropriations will likely not meet inflationary measures much less restore years of cuts to higher education's appropriations.

Past cuts and lack of increased state funding to higher education has forced institutions to use reserves, reduce costs, or increase revenue. Officials at the institutions visited stated cost reduction measures included:

- leaving vacant positions unfilled,
- freezing faculty and support staff salaries,
- reducing student labor,
- deferring new equipment purchases,
- increasing faculty credit hours of teaching,
- reducing library access and acquisitions,
- reducing operating expenses (e.g., supplies, travel, printing, etc.), and
- offering early retirement for faculty and administrators.

In addition to cost reductions and increases in tuition, officials at several institutions said they consumed most reserve funds to offset a portion of the state funding loss.

Expenditures at Some Institutions Higher than Inflation

In fiscal year 2003, the 4-year public institutions spent approximately \$2 billion on education and general operations. Of this amount, \$1.55 billion was unrestricted and \$415 million was restricted.¹¹

Above-inflation spending by some institutions continued to influence

¹¹ Restricted expenditures are generally spending restricted by the terms of an outside donor or supporting agency.

increasing tuition levels. Four of the 4-year institutions experienced increases in overall unrestricted expenditures above the 14 percent growth in HEPI during the period fiscal years 2003-2006. These institutions included Harris Stowe State University, Missouri Southern State University, Missouri Western State University, and Southeast Missouri State University. Increases ranged from 15 percent at Missouri Southern State University to 22 percent at Missouri Western State University. University officials interviewed attributed much of the above-inflation spending to increased costs in areas beyond their control, including: retirement funding, health insurance, subscriptions, technology, utilities, and increased enrollments.

In August 2005, the University of Missouri System reclassified several programs as auxiliary enterprises which eliminated sources of revenue and expenditures making comparison with previous years extremely difficult. University personnel estimate these changes reduce the University's reported unrestricted expenditures by \$120 million. Using the current accounting method, the University of Missouri's unrestricted expenditures are reported as having increased only 6 percent for the period, fiscal years 2003-2006. However, using the old accounting method, which would include the \$120 million in unrestricted expenditures not captured with the new method, brings the 3-year increase in unrestricted expenditures to over 18 percent, well above increases in both CPI and HEPI. Excluding the University of Missouri System, the average increase in unrestricted expenditures for the other 9 Missouri institutions of higher learning was just above 13 percent, approximately the same as HEPI and roughly 5 percent higher than CPI.

For fiscal year 2006, aggregate unrestricted spending on instruction for all 13 campuses accounted for 44 percent of total unrestricted spending in 9 reported categories.¹² The next highest spending categories were academic support, administrative, scholarships and operation and maintenance of plant. These categories ranged from 8 to 10 percent of total unrestricted spending in fiscal year 2006.

¹²Schools report expenditures in the following nine categories: instruction, research, public service, academic support, student services, institutional support, operation and maintenance, scholarships, and mandatory/non-mandatory transfer.

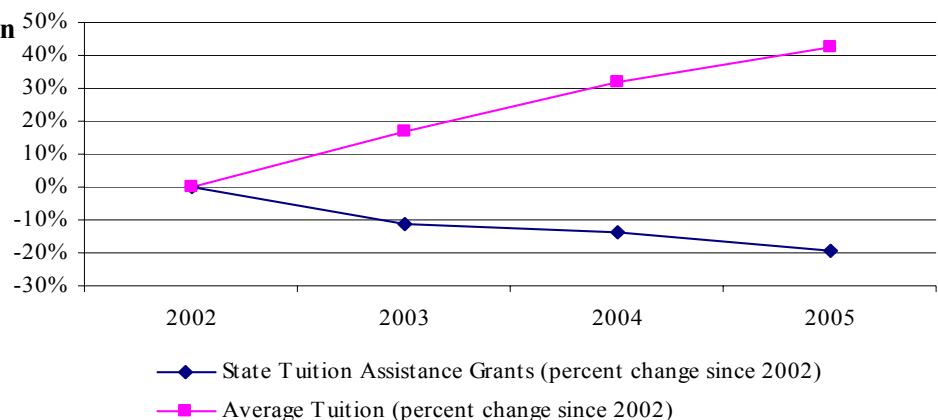
Administrative costs at some institutions increased faster than inflation

Although overall administrative costs¹³ increased somewhat, administrative costs per full-time equivalent (FTE) student increased faster than inflation measured by HEPI at 3 of the 10 institutions—Northwest Missouri State University, Missouri State University, and Truman State University. Additionally, administrative costs per FTE rose faster than CPI at Central Missouri State University. The increases ranged from 13 percent at Central Missouri State University to 33 percent at Truman State University.

Tuition Levels Increased as State Tuition Assistance Decreased

Financial aid has been integral to whether or not a higher education was affordable to many students. The primary forms of financial aid are federal loans and institutional grants. A national survey¹⁴ found while student financial aid hit a record \$129 billion in the United States in 2005, student loans now constitute 50 percent of student aid compared to 46 percent 3 years ago. Conversely, grants now represent 46 percent of the aid compared to 50 percent 3 years ago. Student loans actually increase students' higher education costs because students have to repay both principal and interest. On the other hand, grants, which do not have to be repaid, help reduce the actual cost of their education. According to the report on trends in student aid for 2005 the percentage of total undergraduate aid in the form of grants declined for the third year in a row. Figure 2.3 shows changes in average tuition levels for Missouri 4-year public institutions compared to changes in state tuition assistance grants paid to Missouri students for the 4-year period, 2002 to 2005.

Figure 2.3: Percentage Changes in Average Tuition Levels for Missouri 4-Year Public Universities Compared to State Tuition Assistance Grants to Missouri Students



Source: Prepared by the SAO from data provided by DHE and the Chronicle of Higher Education.

¹³ Includes costs for executive management, fiscal operations, general administrative and logistical services, and public relations and development.

¹⁴ *Trends in Student Aid 2005*, The College Board, New York, New York.

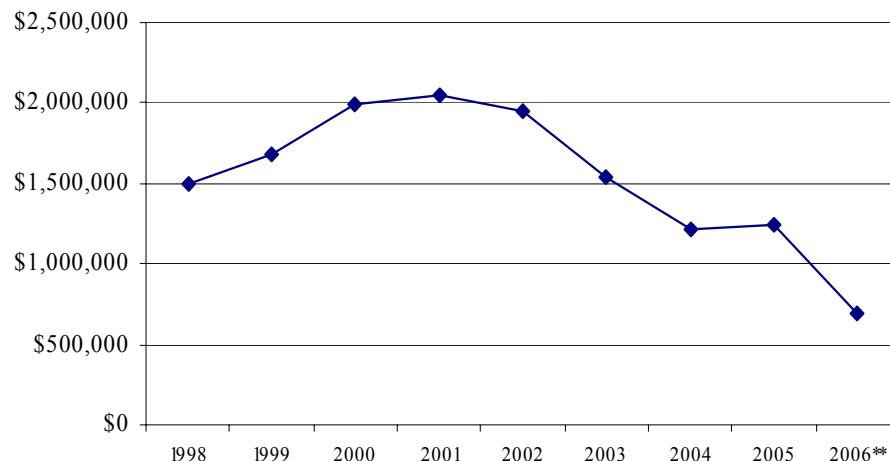
Cost Containment Measures Still Needed to Help Control Tuition Levels

The DHE is not fully performing its statutory mission reviews, which includes a cost-effectiveness element, and is therefore not collecting information and data for assessing the cost-effectiveness of academic programs—the largest component of higher education spending. While institutions have taken a variety of actions to reduce costs to help offset appropriation reductions, institutions have not been required to perform comprehensive on-going efficiency evaluations of academic and non-academic programs, to ensure operational efficiency. In addition, DHE and state institutions have no centralized method (clearinghouse) for identifying cost-effective best practices to help institutions operate more efficiently. It is important for institutions to operate efficiently to provide an affordable education to Missouri students. DHE has no statutory authority to manage and settle disputes involving consortia and collaborative agreements between educational institutions.

DHE Not Performing Statutorily Required Mission Reviews

DHE halted formal mission reviews in 2002 due to budget reductions and staff turnover, according to DHE officials. As a result, DHE has not collected information and data for assessing the cost-effectiveness of academic programs—the largest component of higher education spending. Officials said DHE had historically completed some mission reviews each year, but Section 173.030(7), RSMo requires mission reviews of colleges and universities once every 5 years. As a result, these officials contend a new review cycle would not be required until 2006, because DHE completed formal reviews for all institutions in 2001. However, the officials also noted the formal reviews would only begin again with reinstated funding and personnel. Figure 3.1 shows DHE's general revenue budget appropriations for fiscal years 1998 through 2006.

Figure 3.1: DHE General Revenue Fund Appropriations*



* Coordination and administration funding including mission review oversight

** 2006 decrease includes transfer of information technology staff to Office of Administration

Source: DHE officials

As Figure 3.1 shows, appropriations declined from \$2.04 million in fiscal 2001 to \$695,133 in fiscal year 2006. This resulted in staff dropping from approximately 35 FTE to 12 FTE over this time period. In fiscal 2001, coordination funding totaled about \$1.3 million and 23 FTE compared to fiscal 2006 coordination funding of about \$450,000 and 8 FTE. DHE officials also stated in addition to a significantly reduced staffing levels, it is important to note the salaries of several staff have been split across funding sources. According to DHE officials, in response to this issue and lack of funding, DHE has continued monitoring new program (certificate and degree) offerings to ensure the requests are within the scope of the established mission of the requesting institution rather than completing formal mission reviews.

DHE held workshops with institution presidents and chancellors in late summer and early fall 2004 with an intent to redesign and align mission reviews with quality award systems. Because institution and DHE officials considered the previous review process to be ineffective, these officials suggested various ideas and proposals to improve the process including a new DHE policy regarding how a redesigned process would work. Other ideas and proposals, included such things as (1) simplifying the process, (2) using a process of continuous engagement in systematic self-reflection, (3) using external evaluators or auditors, (4) connecting decisions about programs with resource allocations, (5) establishing a set framework for meaningful informed conversations between DHE and institutions, (6) making the value of the process pervasive at all levels in order to yield improvements, and (7) designating a standardized format for reporting processes and types of results. Officials suggested additional ideas and proposals, however, further DHE staff turnover and budget reduction put formal mission review back on hold.

Institutions Not Required to Perform Comprehensive Efficiency Evaluations

All six of the institutions we visited had taken steps to reduce costs to help offset appropriation reductions. However, because efficiency evaluations were not required, two of the six institutions had no process in place to conduct evaluation studies, and only one of the six institutions had performed a formal evaluation prior to appropriation cuts in 2002. Three of the six institutions had recently conducted evaluations because of financial pressures and/or budget cuts. Also, because no defined evaluation criteria existed, institutions used various methods and criteria in evaluating their programs. The four institutions (of the six) conducting evaluations included Southeast Missouri State University, Central Missouri State University, Northwest Missouri State University, and the University of Missouri system. To show an example of the in-depth analyses institutions engaged to perform evaluations, a more detailed description of Southeast Missouri State University's evaluation process and results is discussed in the next section,

as well as, more limited discussions of other institutions' processes and results.

Southeast Missouri State University began evaluation in 2003

Southeast Missouri State University (SEMO) performed its initial evaluation in 2003 because of a financial emergency (prior to the financial emergency no evaluations had been done). Using a 3-phased approach and defined criteria, SEMO performed an evaluation of both its academic and non-academic programs and instituted an on-going evaluation process to help ensure continued future operational efficiency. Phases I and II of the academic program evaluation and the non-academic program reviews resulted in identified dollar savings and other operational efficiencies. The three phased approach, evaluation criteria, and results are discussed below.

In phase I the university reviewed academic programs in the lowest quartile in terms of the average number of students majoring in those programs over the past 3 years. The university identified undergraduate programs to be reduced or eliminated based on the following program criteria:

- Size, scope, and productivity
- Revenue and other resources generated
- Costs and other expenses associated
- Impact, justification, and overall essentiality to the SEMO mission
- External demand
- Internal demand
- Quality of inputs and processes
- Quality of outputs

Results from phase I of the academic programs review included eliminating three academic majors, two minors, and one graduate program; merging two majors into one; reorganizing curricula in three departments; more efficiently scheduling courses in four departments; eliminating ten faculty positions; and eliminating seven graduate assistantships. The university estimated the related cost savings totaled about \$625,000. SEMO also undertook a thorough review of its non-academic programs, including athletics during phase I using the same criteria and actions taken based on this review resulted in cost reductions totaling \$400,000.

In phase II, the university addressed the Board of Regent's directive to review all programs, become more efficient in curriculum delivery, and establish a more focused institutional mission. Phase II focused on refining the university's mission and then reviewing academic and non-academic programs. To implement phase II, the university required departments to review all programs and to (1) determine how each program could reduce the number of credit hours required for graduation while maintaining

academic quality, (2) submit a report identifying curricular reductions and course mergers, and (3) submit a report addressing the eight program review criteria used in phase I. According to university officials, savings as a result of the Phase II totaled about \$350,000.

In phase III all programs will continue to be on a schedule of annual review, based on key performance indicators, program alignment with directions in the refined mission and the evaluative criteria in phases I and II.

SEMO's approach suggests programs should be evaluated at other institutions

We analyzed academic program enrollments at all of the state's 4-year public institutions using SEMO's initial evaluation criteria. Based on the SEMO criteria, we selected the quartile of academic programs with the lowest average number of enrolled majors for a 3-year period from each institution.

Our analysis showed a total of 205 programs fit the SEMO criteria. Program enrollments ranged from a low 3-year average of .33 majoring students to a high 3-year average of 61 majoring students. The overall average number of enrolled majors for all 205 programs totaled 12 with 139 of the 205 programs averaging less than 12 enrolled majors. Table 3.1 shows examples of 20 programs selected from various institutions:

Table 3.1: Selected Examples of Low Enrollment Programs

| Program | Number of Students Enrolled Per Major by School Year | | | |
|------------------------------------|--|------|------|---------|
| | 2003 | 2004 | 2005 | Average |
| Theatre (non-performance) | 0 | 1 | 0 | 0.33 |
| Pre-Forestry | 0 | 1 | 1 | 0.67 |
| Music Theory | 3 | 3 | 1 | 2.33 |
| German Education | 2 | 2 | 3 | 2.33 |
| Middle School-English/Math(5-9) | 3 | 3 | 1 | 2.33 |
| Music Theory | 3 | 3 | 1 | 2.33 |
| Public Administration | 3 | 2 | 2 | 2.33 |
| Latin | 2 | 4 | 3 | 3.00 |
| Pre-Speech Pathology | 4 | 3 | 4 | 3.67 |
| Pre-Radiology | 3 | 4 | 4 | 3.67 |
| Russian | 5 | 3 | 4 | 4.00 |
| Pre-Optometry | 3 | 6 | 5 | 4.67 |
| Computational Mathematics | 5 | 7 | 2 | 4.67 |
| Hospitality and Tourism Management | 9 | 5 | 2 | 5.33 |
| German | 5 | 8 | 7 | 6.67 |
| Philosophy | 9 | 5 | 6 | 6.67 |
| Agribusiness | 1 | 10 | 10 | 7.00 |
| Respiratory Therapy | 14 | 7 | 7 | 9.33 |
| Physics | 4 | 18 | 11 | 11.00 |
| Geography | 8 | 13 | 14 | 11.67 |

Source: 4-Year Public Institutions

Although we did not design our limited analysis to determine whether the identified programs were wasteful or inefficient, the results showed the average number of enrolled majors in many programs were low enough to warrant further evaluation.

According to officials, DHE would support any institutional effort to monitor and improve operational efficiency at public institutions. However, the officials said public institutions have statutorily mandated governing boards and administrative staff and DHE has no statutory authority to require such evaluations. The officials also said local boards are responsible for ensuring operational efficiency at the institutions they serve. Accordingly, DHE officials said they would welcome the opportunity to support operational improvements at the state's public institutions but would not endorse violating local autonomy to serve the diverse needs of the regions.

Results of other institutions' processes

To respond to increasing financial pressures, Central Missouri State University implemented an evaluation process in 2002 which included a review of academic as well as non-academic programs and services, current policies, and budgeting practices. The evaluation criteria involved reviewing

each program's academic quality and its ability to continue to meet the institution's mission. The university performed an initial evaluation, and then implemented annual reviews of both its academic and non-academic programs and 5-year academic reviews. As part of the annual and 5-year review process, the university sent all departments data on selected measures of academic quality, productivity/cost and diversity. University officials estimated the institution reallocated \$1.5 million of instructional funds over a 4-year period.

Northwest Missouri State University developed its evaluation process in 1995 as a quality improvement initiative. The university tested the annual process, which includes both academic and non-academic program review, at the university between 1999 and 2003 in its three central subsystems of instruction, student services, and support services. Designated as a "universal" operational planning tool, the process includes seven steps and has two parts (1) continuous quality improvement activities, and (2) cost analysis activities. Institution officials gave several examples of efficiency gains realized from the process, including a \$20,000 savings in paper every year by switching some processes from paper to online submission, and a \$750,000 total savings the first year of the program. Officials said having a rational framework available when the university needed to make cuts in response to appropriation reductions was beneficial.

A University of Missouri system policy provides for academic program assessment and audit. Program assessment requires each department, center, and institute to undergo a cyclic assessment process to improve the quality of educational opportunities the academic unit provides. A program audit is designed to determine if a degree program or academic unit should be modified, consolidated, suspended, or discontinued. According to institution officials, informal academic program assessment had been ongoing as noted in policy, but officials implemented the formal program audit process in 2003 due to previous budget cuts. Based on analysis of the university's entire degree program inventory, officials selected 50 programs (8 percent of the total inventory) for campus audits using critical performance indicators. Of the 50 programs audited, the campuses elected to maintain eleven with disposition of the remaining 39 as follows: officials gave 6 programs notice with pending decisions based on future performance, modified 11, merged 6, inactivated 10 (e.g., no longer admit students), and discontinued 6. This process also resulted in the St. Louis campus postponing the implementation of three newly approved programs.

Taking Advantage of Best Practices Could Benefit Institutions

DHE has not developed a formalized process, or central clearinghouse, for identifying, inventorying, and recommending the use of best practices to the state's institutions. We identified institutions within and outside the state that had developed and or implemented cost-effective best practices to help them operate more efficiently. DHE officials told us they had disseminated best practices to institutions through informal processes. They also believe developing a clearinghouse for the identification and implementation of best practices would be a better way to assist institutions to operate more efficiently. However, the officials noted without additional financial support for personnel, equipment, and general support, DHE simply could not take on the additional responsibility.

Examples of identified best practices

Following are a few examples of cost-effective best practices we identified during our audit:

Alternative fuel system

Northwest Missouri State University has developed and implemented a system that uses alternative fuels to heat and cool its facilities. System implementation has resulted in estimated savings of more than \$8 million since its inception in fiscal 1982. The process burns wood chips, paper pellets, and animal waste pellets, instead of natural gas. Officials developed an implementation plan and secured necessary private funding through a \$2 million conditional lease. According to institution officials, \$375,000 in average annual savings have resulted from the use of alternative fuel sources. These savings have been reallocated into the university's instructional programs and provided a portion of the funding needed to bring faculty, administrative, professional and support staff salaries to market-based levels.

Textbook rental programs

Textbook rental is a practice several Missouri institutions use as a way to help reduce the costs of education to students and their parents. Our analysis showed Central Missouri State University, Missouri Southern State University, Northwest Missouri State University, and Southeast Missouri State University have textbook rental programs. These rental programs varied regarding the quantity of books available to rent and how rental costs were determined. Officials at these universities estimated savings to individual students ranged from \$330 to \$650 annually.

Federal legislation, the Affordable Books for College Act, has been proposed to offer federal loans to help college bookstores set up rental programs. A study¹⁵ supporting this legislation indicated a student could save an average of \$600 annually by renting books. We also identified 17

¹⁵ United States Senate Committee Study (Senator Charles Schumer, September 2005)

states that proposed legislative action in 2005 to help reduce textbook costs to students and their parents. Legislation the states proposed ranged from sales tax exemptions and income tax credits to grants and financial aid. Other proposals included creating statewide textbook rental programs and addressed such issues as how (1) book stores sell books, (2) book publishers bundle books and materials for sale, and (3) institutions purchase books.

Best practices from other states

The following illustrates examples of best practices from other states.

Ohio: The Governor’s Commission on Higher Education and the Economy recommended the Ohio Board of Regents submit a biennial “Results through Productivity” report to the Governor and the General Assembly in connection with the budget process. Purposes of the report are to provide policymakers and the public with evidence of actual efficiencies the state’s public colleges and universities attained and to be attained and to stimulate further efficiencies. Excerpts from the 2005 report showed from fiscal 1999 to 2004 FTE campus enrollment increased 15.8 percent, from 320,595 to 371,121. Over the same period campus costs per FTE in 2004 inflation adjusted dollars decreased 2.3 percent, from \$10,788 to \$10,536. During that period, state support per FTE declined \$1,074. The campuses covered \$252 (or almost 25 percent) of the lost revenue through cost reductions. The balance (\$822) was defrayed primarily through tuition increases.

Indiana: The Government Efficiency Commission issued four reports. Findings related to higher education are being used to support greater differentiation in institutional mission, expansion of community college services, increased involvement of communities in supporting college campuses, and greater effort to diversify funding streams in support of higher education initiatives, especially at major research institutions.

Oklahoma: The Academic Efficiencies Project is a new initiative involving faculty from across the state’s higher education system with the goal of identifying and implementing processes and practices that can increase learning productivity and the efficient use of limited state system resources. By working together, faculty from state system institutions can provide higher-quality learning experiences in more cost-effective ways without diminishing academic freedom or compromising individual creativity in the classroom. The outcome of this project will be toolkits of instructional methods and materials for voluntary use in specific subject areas — toolkits that can be used by faculty from across the state, across a wide spectrum of academic disciplines.

Texas: In December 2004 the Higher Education Coordinating Board launched a statewide Higher Education Accountability System. The system

is designed to provide students, parents, policymakers and the public with detailed information related to the four goals of the statewide Closing the Gaps plan, as well as, an additional set of measures related to institutional operational efficiency. Goals of the plan are designed to facilitate improvement in four major areas of higher education, including: participation, success, excellence, and research. The fifth category of measures in the accountability system is institutional efficiency and effectiveness, in which the institutions are evaluated on the cost of educating students, maintaining facilities, faculty salaries, and administrative expenses.

DHE Lacks Authority to Arbitrate Disputes Between Public Institutions

Institutions participate in consortia and collaborative agreements as an efficient and economical way for institutions to deliver academic degree programs among colleges and universities, within and across educational sectors. While Missouri's higher education institutions participate in many such agreements, DHE has no statutory authority to regulate how the various agreements are managed. Missouri has established a number of regional consortia composed of multiple institutions working collaboratively to identify regional needs and to determine the best delivery systems to meet those needs. For example, collaboration could involve two or more institutions agreeing to provide courses for each other's students, located in different states or cities. Agreements range from a 4-year Missouri institution offering a baccalaureate degree in information technology in cooperation with several Missouri community colleges and area businesses to a Missouri institution collaborating with a Kansas institution to offer nurse midwifery and women's health.

DHE provided us a list of more than 120 consortia and collaborative agreements between institutions within and outside the state. While these agreements often result in more economical opportunities for students to obtain higher education services, a recent disagreement between two Missouri institutions resulted in a legal dispute. As of June 2006 this dispute had not been resolved. DHE unsuccessfully attempted to arbitrate a settlement between the institutions. As a result, the institutions are spending public resources to litigate the issues. In this case, the agreement between SEMO and Three Rivers Community College was designed to offer selected associate degrees to students at various area outreach sites owned by SEMO through shared course work provided by both institutions.

The 2006 legislative session considered a law requiring institutions to submit to binding arbitration in matters that arise from disagreements between institutions involved in consortia and or collaborative agreements. However, this measure failed to pass.

Conclusions

Given recent budget pressures, Missouri's higher education institutions have found it difficult to provide students an affordable education due to declining state support. Average tuition for Missouri's 4-year public institutions continues to be the highest among Big 12 states and second highest to its contiguous states. It is imperative institution officials operate as efficiently as feasible to help keep tuition levels affordable for Missouri students. If tuition is not affordable educational opportunities for some students may be jeopardized.

According to officials, DHE is not sufficiently funded and staffed to evaluate operational efficiency through its statutory mission reviews. In fact, the formal review process has not been sufficient to provide the in-depth evaluation institutions need to ensure operational efficiency. Past evaluations performed by some institutions show an evaluation process with defined criteria is more successful. However, because institutions were not required to conduct evaluations some had not done so.

Because no central clearinghouse has been established to identify, inventory, and evaluate/recommend the use of cost-effective best practices, DHE and the institutions have not taken full advantage of the opportunity to evaluate implementing best practices to help the institutions operate more efficiently. As a result, even as tuition levels continued to rise, efficiencies that may have been available to the institutions may not have been realized.

Missouri's higher education institutions participate in many consortia and collaborative agreements; however, DHE has no statutory authority to regulate how these agreements are managed. As a result, occasional disagreements arose from some relationships and in at least one case, resulted in a legal dispute.

Recommendations

We recommend the Commissioner of the Department of Higher Education:

- 3.1 Continue requesting the funding necessary for the department to conduct the mission reviews required by state law. If the necessary funding is not provided, DHE should require state funded institutions to conduct periodic efficiency evaluations using pre-defined evaluation criteria and DHE oversight.
- 3.2 Coordinate with institutional officials to develop a clearinghouse to identify cost-effective best practices.

We recommend the General Assembly:

- 3.3 Provide the DHE statutory authority to arbitrate disputes between public institutions arising from consortia and collaborative agreements among institutions.

Agency Comments

3.1 *The DHE is dedicated to resuming formal mission review. The DHE agrees that institutions should engage in periodic efficiency evaluations to help ensure better appropriate accountability. Furthermore, the results of such evaluations should be reported to the Coordinating Board for Higher Education (CBHE) and posted on the DHE website. The CBHE and the DHE are committed to integrating efficiency evaluations into a reinstituted five-year mission review oversight program when adequate staffing through additional resources becomes available.*

3.2 *Periodically, the DHE has provided cost-effective best practices to public four-year institutional officials. Establishing a clearinghouse to identify cost-effective best practices in coordination with institutional officials will ensure the establishment of a consistent and current database of state, national, and global models. Ensuring that the database is updated regularly and is easily accessible to institutional officials and public policymakers will help informed decisions associated with greater institutional efficiencies.*

We also received correspondence from 5 of the public 4-year institutions. Concerns expressed included:

- The accounting and reporting of unrestricted expenditures and tuition may not be consistent among the various institutions.
- The report compares tuition levels from various states but does not provide a similar comparison for the amount of state support.
- Amounts reported for tuition includes mandatory fees students are required to pay. These fees fund non-academic services such as student union, recreational facilities, and health care expenses.
- Fiscal Year 2006 unrestricted expenditures (and related rates of increase) were based on projected versus actual data.
- Unrestricted expenditures included mandatory transfers for such items as debt service, funding for capital projects, and research projects.
- Some institutions suggested additional analysis based on cost per credit hour and/or costs per FTE student would have been more beneficial.

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- Several institutions believed more examples of cost cutting actions by Missouri institutions should have been presented.
 - One institution noted significant increases in scholarship expense were incurred to offset the effect of rising tuition costs for qualifying students.
 - One institution believed cost comparisons to private institutions would have been beneficial.

Tuition Levels by Institution

This appendix shows the tuition levels for Missouri's 4-year universities, and public 4-year research institutions.

Table I.1 lists the tuition levels and percentage increases in tuition for the 13 Missouri campuses.

Table I.1: Annual Resident Undergraduate Tuition for Public 4-Year Institutions

| Institution | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Percent Increase | |
|--|---------|---------|---------|---------|---------|---------|---------|------------------|-------|
| | | | | | | | | 03-06 | 00-03 |
| Harris-Stowe State University | \$2,595 | \$2,715 | \$2,895 | \$3,760 | \$3,760 | \$4,270 | \$4,650 | 24 | 45 |
| Missouri Southern State University | 2,391 | 2,496 | 2,868 | 3,720 | 3,976 | 3,810 | 3,916 | 5 | 56 |
| Missouri Western State University | 2,774 | 3,026 | 3,224 | 4,064 | 4,464 | 4,778 | 4,778 | 18 | 47 |
| Central Missouri State University | 2,970 | 3,210 | 3,510 | 4,230 | 4,980 | 5,340 | 5,550 | 31 | 42 |
| Northwest Missouri State University | 3,068 | 3,330 | 3,600 | 4,560 | 4,845 | 5,325 | 5,535 | 21 | 49 |
| Southeast Missouri State University | 3,375 | 3,390 | 3,525 | 4,215 | 4,575 | 4,875 | 5,145 | 22 | 25 |
| Missouri State University* | 3,400 | 3,564 | 3,748 | 4,274 | 4,636 | 5,132 | 5,454 | 28 | 26 |
| Truman State University | 3,544 | 3,812 | 3,982 | 4,350 | 4,656 | 5,482 | 5,812 | 34 | 23 |
| Lincoln University | 2,589 | 3,220 | 3,400 | 3,730 | 4,084 | 4,474 | 4,602 | 23 | 44 |
| University of Missouri (UM) - Columbia | 4,641 | 4,726 | 4,887 | 5,552 | 6,558 | 7,100 | 7,745 | 39 | 20 |
| University of Missouri - Kansas City | 4,587 | 4,754 | 5,036 | 5,573 | 6,726 | 7,192 | 7,425 | 33 | 21 |
| University of Missouri - Rolla | 4,800 | 4,805 | 4,975 | 5,661 | 6,839 | 7,299 | 7,545 | 33 | 18 |
| University of Missouri - St. Louis | 4,796 | 4,940 | 5,116 | 5,813 | 6,866 | 7,378 | 7,618 | 31 | 21 |
| Avg. (all 13 campuses) | 3,502 | 3,691 | 3,905 | 4,577 | 5,151 | 5,573 | 5,829 | 27 | 31 |
| Avg. (excluding UM campuses) | 2,967 | 3,196 | 3,417 | 4,100 | 4,442 | 4,832 | 5,049 | 23 | 38 |
| Avg. (UM campuses only) | 4,706 | 4,806 | 5,004 | 5,650 | 6,747 | 7,242 | 7,583 | 34 | 20 |
| HEPI | | | | | | | | 14 | 12 |
| CPI | | | | | | | | 8 | 7 |
| Personal Income** | | | | | | | | 8 | 10 |

*Formerly known as Southwest Missouri State University

**The personal income measure used is real disposable personal income per capita. For the 03-06 period, personal income data was only available until 2005, making 2003-2006 personal income actually a measure of 2003-2005.

Source: Prepared by the SAO using tuition data obtained from the Chronicle of Higher Education and real disposable personal income per capita data obtained from United States Department of Commerce Bureau of Economic Analysis.

Table I.2 ranks the doctoral/research institutions in the comparison group states by academic year 2006 resident undergraduate tuition levels.

Table I.2: Tuition Levels at Public 4-Year Doctoral/Research Institutions

| Institution* | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Percent Increase | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|-----------|
| | | | | | | | | 03-06 | 00-03 |
| University of Illinois at Urbana-Champaign | \$4,526 | \$4,752 | \$5,754 | \$6,704 | \$7,010 | \$7,966 | \$8,688 | 30 | 48 |
| University of Illinois at Chicago | 4,648 | 4,780 | 4,944 | 6,592 | 6,964 | 7,652 | 8,302 | 26 | 42 |
| Colorado School of Mines | 5,211 | 5,412 | 5,621 | 5,952 | 6,433 | 7,082 | 8,143 | 37 | 14 |
| University of Missouri at Columbia | 4,641 | 4,726 | 4,887 | 5,552 | 6,558 | 7,100 | 7,745 | 39 | 20 |
| University of Missouri at St. Louis | 4,796 | 4,940 | 5,116 | 5,813 | 6,866 | 7,378 | 7,618 | 31 | 21 |
| University of Missouri at Rolla | 4,800 | 4,805 | 4,975 | 5,661 | 6,839 | 7,299 | 7,545 | 33 | 18 |
| University of Missouri at Kansas City | 4,587 | 4,754 | 5,036 | 5,573 | 6,726 | 7,192 | 7,425 | 33 | 21 |
| Illinois State University | 4,210 | 4,340 | 4,482 | 4,854 | 5,530 | 6,328 | 7,091 | 46 | 15 |
| University of Texas at Austin | 3,128 | 3,585 | 3,776 | 3,950 | 4,188 | 5,735 | 6,972 | 77 | 26 |
| University of Texas at Dallas | 4,596 | 3,965 | 4,115 | 4,775 | 5,193 | 6,363 | 6,831 | 43 | 4 |
| Southern Illinois University at Carbondale | 3,936 | 4,114 | 4,254 | 4,865 | 5,521 | 6,341 | 6,831 | 40 | 24 |
| Northern Illinois University | 4,090 | 4,274 | 4,484 | 5,326 | 5,164 | 5,946 | 6,638 | 25 | 30 |
| Texas A&M University at College Station | 3,233 | 3,374 | 3,722 | 4,748 | 5,051 | 6,041 | 6,399 | 35 | 47 |
| Texas Tech University | 1,797 | 3,274 | 3,489 | 3,867 | 4,895 | 5,848 | 6,152 | 59 | 115 |
| University of North Texas | 3,555 | 3,055 | 3,271 | 3,565 | 4,414 | 5,562 | 6,110 | 71 | 0 |
| University of Kentucky | 3,296 | 3,446 | 3,706 | 3,975 | 4,546 | 5,165 | 5,812 | 46 | 21 |
| Iowa State University | 3,004 | 3,204 | 3,442 | 4,110 | 5,028 | 5,426 | 5,634 | 37 | 37 |
| University of Iowa | 3,038 | 3,204 | 3,522 | 4,191 | 4,993 | 5,396 | 5,612 | 34 | 38 |
| University of Nebraska at Lincoln | 3,308 | 3,450 | 3,790 | 4,145 | 4,711 | 5,341 | 5,598 | 35 | 25 |
| University of Texas at Arlington | 3,212 | 3,471 | 3,709 | 3,992 | 4,423 | 5,300 | 5,561 | 39 | 24 |
| University of Louisville | 3,246 | 3,448 | 3,796 | 4,082 | 4,450 | 5,040 | 5,532 | 36 | 26 |
| University of Arkansas at Fayetteville | 3,534 | 3,669 | 3,956 | 4,228 | 4,768 | 5,179 | 5,495 | 30 | 20 |
| University of Kansas | 2,518 | 2,725 | 2,884 | 3,484 | 4,101 | 4,737 | 5,413 | 55 | 38 |
| University of Kansas Medical Center | 2,296 | 2,473 | 2,539 | 3,181 | 4,101 | 4,737 | 5,413 | 70 | 39 |
| University of Colorado at Boulder | 3,153 | 3,223 | 3,357 | 3,601 | 4,020 | 4,341 | 5,372 | 49 | 14 |
| University of Tennessee at Knoxville | 3,104 | 3,362 | 3,784 | 4,056 | 4,450 | 4,749 | 5,290 | 30 | 31 |
| University of Arkansas at Little Rock | 3,405 | 3,647 | 3,825 | 4,210 | 4,478 | 4,778 | 5,213 | 24 | 24 |
| Kansas State University | 2,592 | 2,781 | 2,835 | 3,436 | 4,060 | 4,665 | 5,124 | 49 | 33 |
| University of Memphis | 2,818 | 3,085 | 3,470 | 3,704 | 4,234 | 4,480 | 5,084 | 37 | 31 |
| University of Colorado at Denver | 2,418 | 2,648 | 2,934 | 3,265 | 3,595 | 3,978 | 4,906 | 50 | 35 |
| University of Texas at El Paso | 2,652 | 2,985 | 3,200 | 3,036 | 3,865 | 4,648 | 4,888 | 61 | 14 |
| Texas Woman's University | 2,072 | 2,515 | 3,013 | 3,432 | 4,086 | 4,320 | 4,830 | 41 | 66 |
| Middle Tennessee State University | 2,516 | 2,808 | 3,178 | 3,442 | 4,010 | 4,210 | 4,600 | 34 | 37 |
| East Tennessee State University | 2,532 | 2,779 | 3,119 | 3,311 | 3,839 | 4,059 | 4,487 | 36 | 31 |
| Texas Southern University | 2,154 | 1,790 | 2,450 | 2,712 | 3,962 | 4,416 | 4,468 | 65 | 26 |
| University of Oklahoma at Norman | 2,396 | 2,491 | 2,723 | 2,939 | 3,983 | 4,140 | 4,408 | 50 | 23 |
| Oklahoma State University | 2,412 | 2,587 | 2,779 | 2,960 | 3,748 | 4,071 | 4,365 | 47 | 23 |
| Tennessee State University | 2,516 | 2,672 | 2,969 | 3,252 | 3,818 | 4,008 | 4,334 | 33 | 29 |
| Texas A&M University at Kingsville | 2,482 | 2,607 | 2,857 | 2,862 | 2,982 | 4,086 | 4,326 | 51 | 15 |
| Colorado State University | 3,062 | 3,133 | 3,252 | 3,435 | n/a | 3,790 | 4,262 | 24 | 12 |
| Wichita State University | 2,573 | 2,759 | 2,798 | 3,085 | 3,507 | 3,909 | 4,232 | 37 | 20 |
| Texas A&M University at Commerce | 2,516 | 2,716 | 2,776 | 3,224 | 3,624 | 3,834 | 4,136 | 28 | 28 |
| University of Houston | 2,334 | 2,998 | 3,168 | 3,348 | 4,324 | 3,960 | 3,997 | 19 | 43 |
| University of Northern Colorado | 2,754 | 2,783 | 2,842 | 2,984 | 3,242 | 3,370 | 3,837 | 29 | 8 |

*Includes both extensive and intensive doctoral/research institutions as defined by the Carnegie Classification of Institutions of Higher Education

Source: Prepared by SAO based on Chronicle of Higher Education data.

Unrestricted Expenditures

This appendix shows similar trends in both the total unrestricted expenditures and these expenditures per FTE student.

Table II.1 shows the total unrestricted expenditures by the 10 institutions.

Table II.1: Total Unrestricted Expenditures by State Fiscal Year (dollars in thousands)

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005* | 2006** | Percent Change | |
|-------------------------------------|----------|----------|----------|----------|----------------------|----------|-----------|----------------|-------|
| | | | | | | | | 03-06 | 00-03 |
| Harris-Stowe State University | \$12,832 | \$13,786 | \$14,525 | \$13,565 | \$14,840 | \$15,998 | \$15,681 | 16 | 6 |
| Missouri Southern State University | 32,729 | 36,337 | 35,674 | 38,823 | 37,510 | 42,848 | 44,532 | 15 | 19 |
| Missouri Western State University | 34,751 | 36,428 | 35,945 | 34,382 | 36,685 | 41,021 | 41,782 | 22 | -1 |
| Central Missouri State University | 90,566 | 95,267 | 103,723 | 98,496 | 99,325 | 113,322 | 110,770 | 12 | 9 |
| Northwest Missouri State University | 53,359 | 59,989 | 57,698 | 57,500 | 58,723 | 62,000 | 60,814 | 6 | 8 |
| Southeast Missouri State University | 76,291 | 80,412 | 81,475 | 77,774 | 87,867 | 89,808 | 93,099 | 20 | 2 |
| Missouri State University*** | 144,511 | 152,116 | 154,469 | 166,542 | 161,610 | 173,906 | 182,272 | 9 | 15 |
| Truman State University | 69,270 | 73,685 | 70,772 | 72,840 | 73,865 | 78,672 | 80,809 | 11 | 5 |
| Lincoln University | 25,230 | 25,817 | 30,530 | 26,691 | 26,863 | 28,830 | 29,432 | 10 | 6 |
| University of Missouri ¹ | 876,176 | 916,328 | 923,444 | 965,044 | 902,922 ² | 975,729 | 1,023,009 | 6 | 10 |
| HEPI | | | | | | | | 14 | 12 |
| CPI | | | | | | | | 8 | 7 |
| Personal Income**** | | | | | | | | 8 | 10 |

¹Includes all 4 campuses

²2004 represents the first year of a University of Missouri accounting change that reclassified an estimated \$120 million as auxiliary services.

*Estimated

**Projected - includes state appropriations net of Governor's 3 percent withholding

***Formerly known as Southwest Missouri State University

**** The personal income measure used is real disposable personal income per capita. For the 03-06 period, personal income data was only available until 2005, making 2003-2006 personal income actually a measure of 2003-2005.

Source: Prepared by SAO based on DHE expenditure data and real disposable personal income per capita data obtained from United States Department of Commerce Bureau of Economic Analysis via Missouri Department of Economic Development.

Table II.2 shows total unrestricted expenditures per FTE student by fiscal year.

Table II.2: Total Unrestricted Expenditures Per FTE Student by State Fiscal Year

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005* | 2006** | Percent Change | |
|-------------------------------------|----------|----------|----------|----------|---------------------|----------|----------|----------------|-------|
| | | | | | | | | 03-06 | 00-03 |
| Harris-Stowe State University | \$11,970 | \$13,320 | \$13,820 | \$13,273 | \$15,346 | \$15,050 | \$13,111 | -1 | 11 |
| Missouri Southern State University | 7,601 | 8,408 | 8,086 | 8,890 | 9,194 | 10,596 | 10,607 | 19 | 17 |
| Missouri Western State University | 8,515 | 9,021 | 8,782 | 8,317 | 9,327 | 10,265 | 10,276 | 24 | -2 |
| Central Missouri State University | 10,908 | 11,188 | 12,268 | 11,850 | 12,019 | 13,942 | 13,279 | 12 | 9 |
| Northwest Missouri State University | 10,293 | 11,329 | 10,761 | 10,857 | 11,273 | 12,358 | 11,841 | 9 | 5 |
| Southeast Missouri State University | 11,458 | 11,888 | 11,572 | 10,609 | 11,820 | 12,151 | 11,945 | 13 | -7 |
| Missouri State University*** | 10,444 | 10,779 | 10,730 | 11,382 | 10,825 | 11,455 | 12,088 | 6 | 9 |
| Truman State University | 11,463 | 12,663 | 12,371 | 12,831 | 13,345 | 13,829 | 14,290 | 11 | 12 |
| Lincoln University | 10,623 | 10,829 | 12,642 | 11,889 | 11,918 | 12,164 | 12,540 | 5 | 12 |
| University of Missouri ¹ | 21,831 | 22,327 | 22,155 | 21,680 | 19,768 ² | 20,864 | 21,680 | -1 | -1 |
| HEPI | | | | | | | | 14 | 12 |
| CPI | | | | | | | | 8 | 7 |
| Personal Income**** | | | | | | | | 8 | 10 |

¹Includes all 4 campuses

²2004 represents the first year of a University of Missouri accounting change that reclassified an estimated \$120 million as auxiliary services.

*Estimated

**Projected – includes state appropriations net of Governor's 3 percent withholding

***Formerly known as Southwest Missouri State University

**** The personal income measure used is real disposable personal income per capita. For the 03-06 period, personal income data was only available until 2005, making 2003-2006 personal income actually a measure of 2003-2005.

Source: Prepared by SAO based on DHE expenditure data and real disposable personal income per capita data obtained from United States Department of Commerce Bureau of Economic Analysis via Missouri Department of Economic Development.